Please replace the paragraph starting at page 60 line 7 with the following rewritten paragraph:

An alternative β-secretase assay utilizes internally quenched fluorescent substrates to monitor enzyme activity using fluorescence spectroscopy in a single sample or multiwell format. Each reaction contained 50 mM Na-MES (pH 5.5), peptide substrate MCA-EVKMDAEF[K-DNP] (SEQ ID NO: 58) (BioSource International) (50 μM) and purified Hu-Asp-2 enzyme. These components were equilibrated to 37 °C for various times and the reaction initiated by addition of substrate. Excitation was performed at 330 nm and the reaction kinetics were monitored by measuring the fluorescence emission at 390 nm. To detect compounds that modulate Hu-Asp-2 activity, the test compounds were added during the preincubation phase of the reaction and the kinetics of the reaction monitored as described above. Activators are scored as compounds that increase the rate of appearance of fluorescence while inhibitors decrease the rate of appearance of fluorescence.

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IN THE SEQUENCE LISTING

Please replace the existing sequence listing as filed (54 pages) with the substitute sequence listing filed herewith (43 pages).

IN THE CLAIMS

Please cancel all pending claims.

Please add following new claims 151-300.

--151. A purified polypeptide comprising a mammalian Asp2 polypeptide that cleaves a mammalian β-amyloid precursor protein (APP), or a fragment, analog, or derivative of said mammalian Asp2 polypeptide that retains the APP cleaving activity.

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152. A purified polypeptide according to claim 151, selected from the group consisting of:

(a) a polypeptide comprising a purified human Asp2(a) amino acid sequence set forth in SEQ ID NO: 4 or a fragment thereof that cleaves APP;